

December 9, 2016

Board of Trustees
College Savings Plans of Mississippi
501 North West Street, Suite 1101
Jackson, MS 39201

Attention: Ms. Emelia W. Nordan, College Savings Plans and Policy Director

Re: Alternate Economic Assumption Study

Dear Trustees:

Gabriel, Roeder, Smith & Company ("GRS") has performed supplemental valuations for the Mississippi Prepaid Affordable College Tuition Plan ("MPACT") as of the June 30, 2016 Valuation.

The purposes of the valuations were to measure the funded status and funding surplus/deficit as of June 30, 2016 of the Horizon and Legacy Plans under alternate economic assumptions, including economic assumptions that would be appropriate under plan closure.

This report was prepared at the request of the Board and is intended for use by the Board and those designated or approved by the Board. This report may be provided to parties other than the Board only in its entirety and only with the permission of the Board. This report should not be relied on for any purpose other than the purpose described above. GRS is not responsible for unauthorized use of this report.

The results set forth in this report are based upon data and information, furnished by MPACT, concerning Plan benefits, Board's funding policy, and current tuition and enrollment information of Mississippi Colleges and Universities. We reviewed this information for internal and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by MPACT.

There are currently no Actuarial Standards of Practice that specifically refer to prepaid tuition plans. We have followed the guidance from the Actuarial Standards of Practice on pensions due to its similar nature.

The results summarized in this report involve actuarial calculations that require assumptions about future events. The major actuarial assumptions used in this analysis were adopted by and are the responsibility of the Plan and the Plan's Board. We have not performed a detailed experience study, but have performed some analyses on the assumptions of past and expected plan administration. Based on our limited analyses, we believe these assumptions are within a reasonable range and are in compliance with actuarial standards regarding pension calculations.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in Plan provisions or applicable law.

This report is not a recommendation to anyone to participate in MPACT. This report is also not a recommendation on whether or not the plans should be closed. Plan closure is a policy decision and is outside the expertise of the GRS.

David T. Kausch is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

The signing individuals are independent of the plan sponsor.

Respectfully submitted,



Kenneth G. Alberts



David T. Kausch, FSA, EA, FCA, MAAA

KGA/DTK:bd

MISSISSIPPI PREPAID AFFORDABLE COLLEGE TUITION PLAN

ECONOMIC ASSUMPTION STUDY

AS OF JUNE 30, 2016

BACKGROUND

The College Savings Plans of Mississippi sponsors two prepaid tuition programs known as the Legacy Plan and the Horizon Plan. The Legacy Plan is for participants who purchased prepaid contracts in 2012 or earlier. The Horizon Plan is for participants who purchased prepaid tuition contracts in 2015 or later (no prepaid tuition contracts were sold in 2013 or 2014).

Assets for the two plans are accounted for separately. In accordance with Board Policy, assets from either plan can only be used to pay for the benefit from that plan (Horizon assets will not be used to pay Legacy benefits and Legacy assets will not be used to pay Horizon benefits).

However, the assets are pooled together for purposes of investments and liquidity needs. This allows the assets allocation to be uniform between the two plans and allows the valuation to use investment return assumptions for both plans that are consistent with an ongoing open plan.

Each year, prior to the annual pricing and actuarial valuation, the Board reviews the economic assumptions and, with help from the Actuary and Investment Consultants, determines assumptions that will be used in the annual pricing and actuarial valuations. While all assumptions are reviewed annually, the main focus is on the economic assumptions, including future assumed price inflation; investment return; and tuition increases. Price Inflation is set using both historical information and forward-looking information. Investment Return is set using forward-looking information and the assumed price inflation. Tuition Increases are set using historical information and the assumed price inflation.

The balance of this report will discuss:

- Price Inflation
- Investment Return
- Tuition Increases
- Board Requested Alternatives
- Valuation Results

MISSISSIPPI PREPAID AFFORDABLE COLLEGE TUITION PLAN
ECONOMIC ASSUMPTION STUDY
AS OF JUNE 30, 2016

PRICE INFLATION

Price inflation is the starting point for both tuition increases and investment return. As such, when developing assumptions, we establish a price inflation assumption first and then develop a tuition increase assumption and rate for investment return assumption that reasonably fits with that price inflation assumption. To the extent that only the price inflation assumption changes and the real investment return assumption (net of inflation) and real tuition increase assumption (net of inflation) remain the same, the effect on valuation results will be minor since the reductions in the tuition increase assumption and investment return assumption will be mostly offsetting.

The table below shows the historical average price inflation over various periods, ending December 31, 2015:

Period Ending December 31, 2015	Average Annual Increase in CPI-U
1 year	0.7%
3 years	1.0%
5 years	1.5%
10 years	1.9%
20 years	2.2%
30 years	2.6%
40 years	3.7%
50 years	4.1%

The table shows a steady decline in the rate of increase over the last 50 years. Periods of 30 years and less, ending December 31, 2015, have had experienced average inflation of less than 3% with the shorter term periods (less than 6 years) at or below 1.5%.

The Philadelphia Federal Reserve conducts a quarterly survey of the Society of Professional Forecasters. The results of their fourth quarter survey indicate a 10-year average forecast of 2.15% per year, down slightly from their previous estimate of 2.20%.

Another source of information about future price inflation is the market for U.S. Treasury Bonds. The December 31, 2015 yield for a 20-year inflation indexed Treasury bond (20-year TIPS) was 1.07% plus actual inflation. The yield for a non-indexed 20-year Treasury bond was 2.67%. The difference between these two yields (1.60%) gives an approximate measure of the market's expectation of inflation over the next 20 years. This same analysis as of December 1, 2016 results in an inflation estimate of 2.01% over the next 20 years.

Graystone Consulting's inflation assumption is currently 2.25%.

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Based on both the historical information and the forward-looking information, we believe that a range of reasonable price inflation assumptions is 1.5% to 2.5% per year. The current assumption is 2.5%. For purposes of the supplemental valuations contained herein, the Board has requested that we use a price inflation assumption of 1.5%. The Board's requested price inflation assumption is at the low end of the range of reasonable assumptions.

TUITION INCREASE ASSUMPTION

Future increases in tuition are a major component of the plans' liabilities. Each year, we review historical tuition increase experience and the Board adopts a future increase assumption. The first portion of the increase is attributable to inflation. The remainder of the increase may be attributable to a number of factors such as: changes in State share; market influence from nearby States' schools; market influence from private schools, etc.

The College Board publishes an annual report called Trends in College Pricing. When they publish this report they also post the raw data used in the report on their website. We developed the following historical tuition increase information from that raw data:

Type of Institution	Average Annual Tuition and Fee Increases for Public Institutions							
	5-Year Period Ending		10-Year Period Ending		15-Year Period Ending		20-Year Period Ending	
	2015	2014	2015	2014	2015	2014	2015	2014
2-Year (Nominal)	4.60%	5.23%	4.33%	4.60%	5.14%	5.36%	4.86%	5.22%
4-Year (Nominal)	4.04%	4.82%	5.40%	5.73%	6.54%	6.53%	5.97%	6.11%
Average CPI	1.83%	2.02%	2.07%	2.31%	2.19%	2.43%	2.26%	2.41%
2-Year (Real)	2.77%	3.21%	2.26%	2.29%	2.95%	2.93%	2.60%	2.81%
4-Year (Real)	2.21%	2.80%	3.33%	3.42%	4.35%	4.10%	3.71%	3.70%

Data Source: 2015-trends-college-pricing-source-data-final.xlsx (Table 3) downloaded from the College Board's website.

The last two rows show that a range of reasonable real tuition increase assumptions (based on historical data) is 2.00% to 3.00% for 2-year colleges and 2.50% to 4.00% for 4-year colleges. After adjusting for the Board's 1.50% inflation assumption, the ranges for nominal tuition increase assumption become 3.50% to 4.50% for 2-year colleges and 4.00% to 5.50% for 4-year colleges. The Board has selected 4.00% for 2-year colleges and 4.50% for 4-year colleges for the supplemental valuations contained herein. The Board's requested tuition increase assumptions are within the range of reasonable assumptions.

MISSISSIPPI PREPAID AFFORDABLE COLLEGE TUITION PLAN
ECONOMIC ASSUMPTION STUDY
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INVESTMENT RETURN ASSUMPTION

The future investment return assumption is also used as the discount rate and is therefore a major component of the plans' liabilities. Each year, we review the future outlook for investment return based on the Board's target asset allocation and the capital market assumptions of 8 investment consultants with significant public sector experience. The 8 investment consultants in this year's survey are PCA, BNY Mellon, JP Morgan, NEPC, RV Kuhns, Mercer, HEK and Wilshire. The following chart shows the results of that analysis based on the regular valuation assumption of 2.50%:

Investment Consultant	Distribution of 20-Year Average Geometric Net Nominal Return			Probability of exceeding 6.75%
	40th	50th	60th	
(1)	(2)	(3)	(4)	(5)
1	4.54%	5.29%	6.03%	31.04%
2	4.84%	5.57%	6.30%	34.18%
3	5.41%	6.10%	6.78%	40.43%
4	5.33%	6.07%	6.81%	40.79%
5	5.40%	6.13%	6.87%	41.62%
6	5.67%	6.37%	7.07%	44.49%
7	5.85%	6.53%	7.21%	46.66%
8	5.76%	6.52%	7.28%	46.91%
Average	5.35%	6.07%	6.79%	40.77%

These schedules show that the current valuation assumption of 6.75% is in a range of reasonable assumptions (between the 40th and 60th percentiles), based on an inflation assumption of 2.50%. Adjusting for the 1.50% inflation assumption requested by the Board, for these supplemental valuations, results in the reasonable range dropping by 1% (the difference in the price inflation). This is seen in the chart on the following page.

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Investment Consultant	Distribution of 20-Year Average Geometric Net Nominal Return			Probability of exceeding 6.75%
	40th	50th	60th	
(1)	(2)	(3)	(4)	(5)
1	3.54%	4.28%	5.03%	20.30%
2	3.84%	4.56%	5.29%	22.61%
3	4.41%	5.09%	5.77%	27.04%
4	4.32%	5.06%	5.80%	28.33%
5	4.39%	5.12%	5.86%	28.97%
6	4.66%	5.36%	6.06%	30.89%
7	4.84%	5.52%	6.20%	32.41%
8	4.75%	5.51%	6.27%	34.07%
Average	4.34%	5.06%	5.79%	28.08%

The investment return assumptions requested by the Board for these supplemental valuations (5.00% and 5.75%) are in the range of reasonable assumptions (between the 40th and 60th percentiles), based on an inflation assumption of 1.50%.

SUPPLEMENTAL VALUATIONS

The Board requested supplemental valuations to show the effect of different assumptions. Alternates 1 through 3 show specific assumptions requested by the Board. Alternate 4 was based on closing the plans to new participants. Graystone estimated an average asset allocation during the remainder of plan solvency based on the estimated cash flow needs as shown in the annual valuations. It is important to note that the asset allocation used by Graystone was not a recommendation, but just an estimate to determine how the expected rate of return would change if the plans were closed. After adjusting for the Boards' requested inflation assumption of 1.50%, the expected rate of return under this alternate was estimated to be an average of 4.20% of the remaining solvency period of the plan. The specific assumptions used for each of the alternates are shown in the following table:

	Current Valuation Assumptions	Alternate 1	Alternate 2	Alternate 3	Plan Closure Alternate 4
Assumed Investment Return	6.75%	5.00%	5.75%	2.00% for 3 years & 5.00% Thereafter	4.20%
Assumed Tuition Increases	6.00%/5.50%	4.50%/4.00%	4.50%/4.00%	4.50%/4.00%	4.50%/4.00%
Assumed Price Inflation	2.50%	1.50%	1.50%	1.50%	1.50%

Valuation results for the Legacy and Horizon Plans for each of the alternate valuations follow.

MISSISSIPPI PREPAID AFFORDABLE COLLEGE TUITION PLAN
ECONOMIC ASSUMPTION STUDY
AS OF JUNE 30, 2016

SUMMARY OF RESULTS – LEGACY PLAN

	Current Valuation Assumptions	Alternate 1	Alternate 2	Alternate 3	Plan Closure Alternate 4
Assumed Investment Return	6.75%	5.00%	5.75%	2.00% for 3 years & 5.00% Thereafter	4.20%
Assumed Tuition Increases	6.00%/5.50%	4.50%/4.00%	4.50%/4.00%	4.50%/4.00%	4.50%/4.00%
Assumed Price Inflation	2.50%	1.50%	1.50%	1.50%	1.50%
1. Assets					
a. Actuarial Value of Assets (in Trust)	\$ 306.1	\$ 306.1	\$ 306.1	\$ 306.1	\$ 306.1
b. PV Future Member Contributions	19.9	21.1	20.6	22.2	21.7
c. Total Actuarial Value of Assets	<u>\$ 326.0</u>	<u>\$ 327.2</u>	<u>\$ 326.7</u>	<u>\$ 328.3</u>	<u>\$ 327.8</u>
2. Actuarial Results					
Liabilities - Tuition and Fees	\$ 431.0	\$ 440.9	\$ 420.9	\$ 465.4	\$ 463.9
Liabilities - PV of Future Admin. Expenses	<u>21.5</u>	<u>22.0</u>	<u>21.0</u>	<u>23.3</u>	<u>23.2</u>
Liabilities Total	\$ 452.5	\$ 462.9	\$ 441.9	\$ 488.7	\$ 487.1
Margin/(Deficit)	\$(126.5)	\$ (135.7)	\$(115.2)	\$(160.4)	\$(159.3)
Funded Ratio	72.1%	70.7%	73.9%	67.2%	67.3%
Year Insolvent	2025	2025	2025	2024	2024

MISSISSIPPI PREPAID AFFORDABLE COLLEGE TUITION PLAN
ECONOMIC STUDY
AS OF JUNE 30, 2016

SUMMARY OF RESULTS – HORIZON PLAN

	Current Valuation Assumptions	Alternate 1	Alternate 2	Alternate 3	Plan Closure Alternate 4
Assumed Investment Return	6.75%	5.00%	5.75%	2.00% for 3 years & 5.00% Thereafter	4.20%
Assumed Tuition Increases	6.00%/5.50%	4.50%/4.00%	4.50%/4.00%	4.50%/4.00%	4.50%/4.00%
Assumed Price Inflation	2.50%	1.50%	1.50%	1.50%	1.50%
1. Assets					
a. Market Value of Assets (in Trust)	\$16.8	\$16.8	\$16.8	\$16.8	\$16.8
b. PV Future Member Contributions	11.9	12.7	12.4	13.4	13.1
c. Total Market Value of Assets (MVA)	\$28.7	\$29.5	\$29.2	\$30.2	\$29.9
2. Actuarial Results					
Liabilities - Tuition and Fees	\$23.3	\$24.2	\$21.9	\$25.7	\$27.0
Liabilities - PV of Future Admin. Expenses	1.2	1.2	1.1	1.3	1.4
Liabilities Total	\$24.5	\$25.4	\$23.0	\$26.9	\$28.4
Margin/(Deficit)	\$ 4.2	\$ 4.1	\$ 6.2	\$ 3.3	\$ 1.5
Funded Ratio	117.2%	116.1%	127.0%	112.3%	105.3%
Year Insolvent	Never	Never	Never	Never	Never

MISSISSIPPI PREPAID AFFORDABLE COLLEGE TUITION PLAN
ECONOMIC STUDY
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COMMENTS

Comment 1: Under each of the alternate assumptions (and the current valuation assumptions) the Horizon plan is estimated to have sufficient assets to cover future tuition payments (and expenses). This result is related to the risk reserves built into the pricing that have been adopted by the Board.

Comment 2: Under each of the alternate assumptions (and the current valuation assumptions), the Legacy plan is estimated to become insolvent. The present value of the shortfall ranges from \$115 million to \$159 million.

Comment 3: We believe that all of the current set of assumptions and alternate sets 1 through 3 are reasonable, given the open-ongoing condition of the Horizon Plan and the pooled assets for investment purposes of the Legacy and Horizon plans.

Comment 4: We believe that the set of assumptions in Alternate 4 are reasonable if the Horizon plan is closed. This set of assumptions is also reasonable for the Legacy Plan, if the Horizon Plan remains open but the assets of the Legacy Plan are no longer pooled with Horizon Plan assets for investment purposes.

Comment 5: All actuarial assumptions in this report are expectations of future experience over the future lifetime of the Plans. In particular, the discount rate used for the liabilities is the expected return on assets. There is an alternate viewpoint of financial economics which would base the discount rate on observable risk-free discount rates (i.e., U.S. Treasury yields). A liability calculated on the basis of risk-free rates is sometimes referred to as a “solvency” liability, which represents the cost in the market to completely de-risk the assets and match the cash flow timing of plan payments. As of June 30, 2016, the 10-year Treasury yield was 1.49% and the 20-year Treasury yield was 1.86% (the corresponding real yields were 0.09% and 0.53%, respectively). A solvency liability calculated in this manner is independent of the Plans’ investment policy and may be used as a measure of risk. We have not prepared such a calculation nor is such a calculation currently required under actuarial standards. It is likely that such a calculation will be required in the next few years.

Comment 6: It is possible that the Legacy liabilities could be settled through some kind of third party insurance provider (assuming the state could find a provider willing to undertake the liabilities). While GRS does not have relevant experience in this area, we understand that such a settlement cost would currently be similar to the unfunded liabilities measured under the solvency approach discussed in comment 5.

Comment 7: Actuarial assumptions other than price inflation, tuition increases and investment return were the same as used in the June 30, 2016 annual actuarial valuation and are disclosed in the valuation reports.

Comment 8: Participant data is the same as provided for the June 30, 2016 annual actuarial valuations and is summarized in those reports.

**Mississippi Prepaid Affordable College Tuition Program (MPACT)
Legacy Plan**

Projection Based on June 30, 2016 Valuation Results

Input Valuation	
Assumed Rate of Investment Return	6.75%
Geometric Average of Actual Rates of Investment Returns	6.75%
Annual Cash Contribution from State or Other Outside Source \$	-

Estimated Valuation Results	
Present Value of Future Tuition and Fees \$	452,513,010
Present Value of Future Contract Payments \$	19,957,703
June 30, 2016 Assets \$	306,085,437
Unfunded Liability / (Margin) \$	126,469,870
Funded Status	72.05%
Year Insolvent	2025

Fiscal Year	Actual Investment Return During Year	Actual Tuition Increase for Universities	Actual Tuition Increase for Junior Colleges/CC	Actuarial Value of Assets at BOY	Projected Tuition Payments (BOY)*	Projected Administrative Expenses Plus Cash Contributions	Projected Contract Payments (BOY)	Actuarial Value of Assets at EOY
2017	6.75%	n/a	n/a	\$ 306,085,437	\$ 32,834,815	\$ 1,641,741	\$ 4,330,771	\$ 279,715,140
2018	6.75%	6.00%	5.50%	279,715,140	36,220,635	1,811,032	3,982,508	252,148,480
2019	6.75%	6.00%	5.50%	252,148,480	40,777,859	2,038,893	3,471,591	227,167,543
2020	6.75%	6.00%	5.50%	227,167,543	45,704,482	2,285,224	2,961,320	194,433,550
2021	6.75%	6.00%	5.50%	194,433,550	48,804,099	2,440,205	2,408,279	155,425,358
2022	6.75%	6.00%	5.50%	155,425,358	48,239,282	2,411,964	1,882,631	113,856,074
2023	6.75%	6.00%	5.50%	113,856,074	49,069,973	2,453,499	1,433,773	68,070,605
2024	6.75%	6.00%	5.50%	68,070,605	48,995,666	2,449,783	1,163,283	18,989,158
2025	6.75%	6.00%	5.50%	18,989,158	47,569,374	2,378,469	889,706	(32,098,634)
2026	6.75%	6.00%	5.50%	(32,098,634)	47,460,085	2,373,004	694,256	(86,720,996)
2027	6.75%	6.00%	5.50%	(86,720,996)	41,815,270	2,090,763	500,244	(138,910,343)
2028	6.75%	6.00%	5.50%	(138,910,343)	39,970,557	1,998,528	333,789	(192,732,469)
2029	6.75%	6.00%	5.50%	(192,732,469)	37,718,388	1,885,919	193,057	(247,813,421)
2030	6.75%	6.00%	5.50%	(247,813,421)	34,381,010	1,719,051	85,514	(302,986,355)
2031	6.75%	6.00%	5.50%	(302,986,355)	27,648,556	1,382,428	48,641	(354,376,586)
2032	6.75%	6.00%	5.50%	(354,376,586)	20,936,079	1,046,804	30,238	(401,731,454)
2033	6.75%	6.00%	5.50%	(401,731,454)	13,403,368	670,168	15,129	(443,855,677)
2034	6.75%	6.00%	5.50%	(443,855,677)	7,167,890	358,394	1,111	(481,849,058)
2035	6.75%	6.00%	5.50%	(481,849,058)	1,436,466	71,823	-	(515,983,968)
2036	6.75%	6.00%	5.50%	(515,983,968)	284,630	14,232	-	(551,131,921)
2037	6.75%	6.00%	5.50%	(551,131,921)	-	-	-	(588,333,326)
2038	6.75%	6.00%	5.50%	(588,333,326)	-	-	-	(628,045,825)

* Includes estimated refund payments for contracts who are past the expected matriculation year and did not utilize credits within the past year.

Mississippi Prepaid Affordable College Tuition Program (MPACT)

Legacy Plan

Projection Based on June 30, 2016 Alternate 1

Input	
Valuation	
Assumed Rate of Investment Return	5.00%
Geometric Average of Actual Rates of Investment Returns	5.00%
Annual Cash Contribution from State or Other Outside Source	\$ -

Estimated Valuation Results	
Present Value of Future Tuition and Fees	\$ 462,919,961
Present Value of Future Contract Payments	\$ 21,108,679
June 30, 2016 Assets	\$ 306,085,437
Unfunded Liability / (Margin)	\$ 135,725,845
Funded Status	70.68%
Year Insolvent	2025

Fiscal Year	Actual Investment Return During Year	Actual Tuition Increase for Universities	Actual Tuition Increase for Junior Colleges/CC	Actuarial Value of Assets at BOY	Projected Tuition Payments (BOY)*	Projected Administrative Expenses Plus Cash Contributions	Projected Contract Payments (BOY)	Actuarial Value of Assets at EOY
2017	5.00%	n/a	n/a	\$ 306,085,437	\$ 33,053,458	\$ 1,652,673	\$ 4,366,712	\$ 274,682,880
2018	5.00%	4.50%	4.00%	274,682,880	35,951,850	1,797,593	4,015,558	242,896,491
2019	5.00%	4.50%	4.00%	242,896,491	39,911,831	1,995,592	3,500,401	214,713,943
2020	5.00%	4.50%	4.00%	214,713,943	44,117,400	2,205,870	2,985,896	179,945,398
2021	5.00%	4.50%	4.00%	179,945,398	46,469,580	2,323,479	2,428,265	140,259,634
2022	5.00%	4.50%	4.00%	140,259,634	45,315,754	2,265,788	1,898,255	99,305,164
2023	5.00%	4.50%	4.00%	99,305,164	45,466,349	2,273,317	1,445,672	55,661,728
2024	5.00%	4.50%	4.00%	55,661,728	44,826,396	2,241,320	1,172,937	10,255,297
2025	5.00%	4.50%	4.00%	10,255,297	42,974,984	2,148,749	897,089	(35,669,913)
2026	5.00%	4.50%	4.00%	(35,669,913)	42,530,633	2,126,532	700,018	(83,608,413)
2027	5.00%	4.50%	4.00%	(83,608,413)	36,507,563	1,825,378	504,396	(127,508,807)
2028	5.00%	4.50%	4.00%	(127,508,807)	34,403,212	1,720,161	336,559	(171,460,401)
2029	5.00%	4.50%	4.00%	(171,460,401)	32,005,267	1,600,263	194,659	(215,114,836)
2030	5.00%	4.50%	4.00%	(215,114,836)	28,760,275	1,438,014	86,224	(257,488,246)
2031	5.00%	4.50%	4.00%	(257,488,246)	22,800,923	1,140,046	49,045	(295,449,179)
2032	5.00%	4.50%	4.00%	(295,449,179)	17,021,165	851,058	30,489	(328,955,459)
2033	5.00%	4.50%	4.00%	(328,955,459)	10,741,654	537,083	15,255	(357,229,888)
2034	5.00%	4.50%	4.00%	(357,229,888)	5,662,797	283,140	1,120	(381,333,440)
2035	5.00%	4.50%	4.00%	(381,333,440)	1,117,660	55,883	-	(401,632,332)
2036	5.00%	4.50%	4.00%	(401,632,332)	217,859	10,893	-	(421,954,138)
2037	5.00%	4.50%	4.00%	(421,954,138)	-	-	-	(443,051,844)
2038	5.00%	4.50%	4.00%	(443,051,844)	-	-	-	(465,204,437)

* Includes estimated refund payments for contracts who are past the expected matriculation year and did not utilize credits within the past year.

Mississippi Prepaid Affordable College Tuition Program (MPACT)

Legacy Plan

Projection Based on June 30, 2016 Alternate 2

Input	
Valuation	
Assumed Rate of Investment Return	5.75%
Geometric Average of Actual Rates of Investment Returns	5.75%
Annual Cash Contribution from State or Other Outside Source	\$ -

Estimated Valuation Results	
Present Value of Future Tuition and Fees	\$ 441,906,010
Present Value of Future Contract Payments	\$ 20,599,810
June 30, 2016 Assets	\$ 306,085,437
Unfunded Liability / (Margin)	\$ 115,220,763
Funded Status	73.93%
Year Insolvent	2025

Fiscal Year	Actual Investment Return During Year	Actual Tuition Increase for Universities	Actual Tuition Increase for Junior Colleges/CC	Actuarial Value of Assets at BOY	Projected Tuition Payments (BOY)*	Projected Administrative Expenses Plus Cash Contributions	Projected Contract Payments (BOY)	Actuarial Value of Assets at EOY
2017	5.75%	n/a	n/a	\$ 306,085,437	\$ 32,959,084	\$ 1,647,954	\$ 4,351,200	\$ 276,839,360
2018	5.75%	4.50%	4.00%	276,839,360	35,849,784	1,792,489	4,001,293	247,082,334
2019	5.75%	4.50%	4.00%	247,082,334	39,798,163	1,989,908	3,487,966	220,787,207
2020	5.75%	4.50%	4.00%	220,787,207	43,991,444	2,199,572	2,975,289	187,781,840
2021	5.75%	4.50%	4.00%	187,781,840	46,336,202	2,316,810	2,419,639	149,687,503
2022	5.75%	4.50%	4.00%	149,687,503	45,186,297	2,259,315	1,891,512	110,121,074
2023	5.75%	4.50%	4.00%	110,121,074	45,336,841	2,266,842	1,440,536	67,635,508
2024	5.75%	4.50%	4.00%	67,635,508	44,700,573	2,235,029	1,168,770	23,126,125
2025	5.75%	4.50%	4.00%	23,126,125	42,856,004	2,142,800	893,903	(22,185,056)
2026	5.75%	4.50%	4.00%	(22,185,056)	42,418,991	2,120,950	697,531	(69,824,044)
2027	5.75%	4.50%	4.00%	(69,824,044)	36,400,588	1,820,029	502,604	(113,725,726)
2028	5.75%	4.50%	4.00%	(113,725,726)	34,302,376	1,715,119	335,364	(157,998,809)
2029	5.75%	4.50%	4.00%	(157,998,809)	31,911,473	1,595,574	193,968	(202,312,322)
2030	5.75%	4.50%	4.00%	(202,312,322)	28,676,110	1,433,806	85,917	(245,695,659)
2031	5.75%	4.50%	4.00%	(245,695,659)	22,734,392	1,136,720	48,870	(285,015,180)
2032	5.75%	4.50%	4.00%	(285,015,180)	16,971,550	848,578	30,381	(320,216,210)
2033	5.75%	4.50%	4.00%	(320,216,210)	10,710,899	535,545	15,201	(350,505,682)
2034	5.75%	4.50%	4.00%	(350,505,682)	5,646,740	282,337	1,116	(376,928,578)
2035	5.75%	4.50%	4.00%	(376,928,578)	1,114,973	55,749	-	(399,840,009)
2036	5.75%	4.50%	4.00%	(399,840,009)	217,536	10,877	-	(423,072,356)
2037	5.75%	4.50%	4.00%	(423,072,356)	-	-	-	(447,399,017)
2038	5.75%	4.50%	4.00%	(447,399,017)	-	-	-	(473,124,460)

* Includes estimated refund payments for contracts who are past the expected matriculation year and did not utilize credits within the past year.

Mississippi Prepaid Affordable College Tuition Program (MPACT)

Legacy Plan

Projection Based on June 30, 2016 Alternate 3

Input	
Valuation	
Assumed Rate of Investment Return	***
Geometric Average of Actual Rates of Investment Returns	4.59%
Annual Cash Contribution from State or Other Outside Source	\$ -

Estimated Valuation Results	
Present Value of Future Tuition and Fees	\$ 488,701,718
Present Value of Future Contract Payments	\$ 22,162,540
June 30, 2016 Assets	\$ 306,085,437
Unfunded Liability / (Margin)	\$ 160,453,741
Funded Status	67.17%
Year Insolvent	2024

Fiscal Year	Actual Investment Return During Year	Actual Tuition Increase for Universities	Actual Tuition Increase for Junior Colleges/CC	Actuarial Value of Assets at BOY	Projected Tuition Payments (BOY)*	Projected Administrative Expenses Plus Cash Contributions	Projected Contract Payments (BOY)	Actuarial Value of Assets at EOY
2017	2.00%	n/a	n/a	\$ 306,085,437	\$ 33,441,387	\$ 1,672,069	\$ 4,430,463	\$ 266,060,053
2018	2.00%	4.50%	4.00%	266,060,053	36,371,407	1,818,570	4,074,183	226,483,188
2019	2.00%	4.50%	4.00%	226,483,188	40,379,085	2,018,954	3,551,505	191,389,387
2020	5.00%	4.50%	4.00%	191,389,387	44,117,400	2,205,870	2,985,896	155,454,614
2021	5.00%	4.50%	4.00%	155,454,614	46,469,580	2,323,479	2,428,265	114,544,311
2022	5.00%	4.50%	4.00%	114,544,311	45,315,754	2,265,788	1,898,255	72,304,075
2023	5.00%	4.50%	4.00%	72,304,075	45,466,349	2,273,317	1,445,672	27,310,585
2024	5.00%	4.50%	4.00%	27,310,585	44,826,396	2,241,320	1,172,937	(19,513,403)
2025	5.00%	4.50%	4.00%	(19,513,403)	42,974,984	2,148,749	897,089	(66,927,049)
2026	5.00%	4.50%	4.00%	(66,927,049)	42,530,633	2,126,532	700,018	(116,428,405)
2027	5.00%	4.50%	4.00%	(116,428,405)	36,507,563	1,825,378	504,396	(161,969,799)
2028	5.00%	4.50%	4.00%	(161,969,799)	34,403,212	1,720,161	336,559	(207,644,443)
2029	5.00%	4.50%	4.00%	(207,644,443)	32,005,267	1,600,263	194,659	(253,108,080)
2030	5.00%	4.50%	4.00%	(253,108,080)	28,760,275	1,438,014	86,224	(297,381,152)
2031	5.00%	4.50%	4.00%	(297,381,152)	22,800,923	1,140,046	49,045	(337,336,730)
2032	5.00%	4.50%	4.00%	(337,336,730)	17,021,165	851,058	30,489	(372,937,388)
2033	5.00%	4.50%	4.00%	(372,937,388)	10,741,654	537,083	15,255	(403,410,913)
2034	5.00%	4.50%	4.00%	(403,410,913)	5,662,797	283,140	1,120	(429,823,516)
2035	5.00%	4.50%	4.00%	(429,823,516)	1,117,660	55,883	-	(452,546,912)
2036	5.00%	4.50%	4.00%	(452,546,912)	217,859	10,893	-	(475,414,447)
2037	5.00%	4.50%	4.00%	(475,414,447)	-	-	-	(499,185,169)
2038	5.00%	4.50%	4.00%	(499,185,169)	-	-	-	(524,144,428)

* Includes estimated refund payments for contracts who are past the expected matriculation year and did not utilize credits within the past year.

*** The Assumed rate of return is 2.0% for 3 years and 5% thereafter.

**Mississippi Prepaid Affordable College Tuition Program (MPACT)
Legacy Plan**

Projection Based on June 30, 2016 Alternate 4

Input	
Valuation	
Assumed Rate of Investment Return	4.20%
Geometric Average of Actual Rates of Investment Returns	4.20%
Annual Cash Contribution from State or Other Outside Source	\$ -

Estimated Valuation Results	
Present Value of Future Tuition and Fees	\$ 487,120,218
Present Value of Future Contract Payments	\$ 21,679,242
June 30, 2016 Assets	\$ 306,085,437
Unfunded Liability / (Margin)	\$ 159,355,539
Funded Status	67.29%
Year Insolvent	2024

Fiscal Year	Actual Investment Return During Year	Actual Tuition Increase for Universities	Actual Tuition Increase for Junior Colleges/CC	Actuarial Value of Assets at BOY	Projected Tuition Payments (BOY)*	Projected Administrative Expenses Plus Cash Contributions	Projected Contract Payments (BOY)	Actuarial Value of Assets at EOY
2017	4.20%	n/a	n/a	\$ 306,085,437	\$ 33,155,253	\$ 1,657,763	\$ 4,383,443	\$ 272,382,971
2018	4.20%	4.50%	4.00%	272,382,971	36,061,943	1,803,097	4,030,944	238,467,973
2019	4.20%	4.50%	4.00%	238,467,973	40,034,438	2,001,722	3,513,813	208,343,342
2020	4.20%	4.50%	4.00%	208,343,342	44,253,264	2,212,663	2,997,336	171,799,490
2021	4.20%	4.50%	4.00%	171,799,490	46,613,455	2,330,673	2,437,569	130,555,234
2022	4.20%	4.50%	4.00%	130,555,234	45,455,400	2,272,770	1,905,528	88,291,361
2023	4.20%	4.50%	4.00%	88,291,361	45,606,048	2,280,302	1,451,211	43,614,182
2024	4.20%	4.50%	4.00%	43,614,182	44,962,120	2,248,106	1,177,431	(2,520,194)
2025	4.20%	4.50%	4.00%	(2,520,194)	43,103,325	2,155,166	900,527	(48,847,041)
2026	4.20%	4.50%	4.00%	(48,847,041)	42,651,059	2,132,553	702,700	(96,830,928)
2027	4.20%	4.50%	4.00%	(96,830,928)	36,622,956	1,831,148	506,328	(140,439,409)
2028	4.20%	4.50%	4.00%	(140,439,409)	34,511,982	1,725,599	337,849	(183,745,386)
2029	4.20%	4.50%	4.00%	(183,745,386)	32,106,440	1,605,322	195,405	(226,386,737)
2030	4.20%	4.50%	4.00%	(226,386,737)	28,851,062	1,442,553	86,554	(267,370,737)
2031	4.20%	4.50%	4.00%	(267,370,737)	22,872,687	1,143,634	49,232	(303,574,015)
2032	4.20%	4.50%	4.00%	(303,574,015)	17,074,682	853,734	30,606	(334,973,643)
2033	4.20%	4.50%	4.00%	(334,973,643)	10,774,827	538,741	15,313	(360,815,318)
2034	4.20%	4.50%	4.00%	(360,815,318)	5,680,116	284,006	1,124	(382,183,004)
2035	4.20%	4.50%	4.00%	(382,183,004)	1,120,557	56,028	-	(399,460,692)
2036	4.20%	4.50%	4.00%	(399,460,692)	218,206	10,910	-	(416,476,780)
2037	4.20%	4.50%	4.00%	(416,476,780)	-	-	-	(433,968,805)
2038	4.20%	4.50%	4.00%	(433,968,805)	-	-	-	(452,195,495)

* Includes estimated refund payments for contracts who are past the expected matriculation year and did not utilize credits within the past year.

Mississippi Prepaid Affordable College Tuition Program (MPACT)

Horizon Plan

Projection Based on June 30, 2016 Valuation Results

Input	
Valuation	
Assumed Rate of Investment Return	6.75%
Geometric Average of Actual Rates of Investment Returns	6.75%
Annual Cash Contribution from State or Other Outside Source	\$ -

Estimated Valuation Results	
Present Value of Future Tuition and Fees	\$ 24,493,210
Present Value of Future Contract Payments	\$ 11,956,923
June 30, 2016 Assets	\$ 16,760,182
Unfunded Liability / (Margin)	\$ (4,223,896)
Funded Status	117.25%
Year Insolvent	Never

Fiscal Year	Actual Investment Return During Year	Actual Tuition Increase for Universities	Actual Tuition Increase for Junior Colleges/CC	Actuarial Value of Assets at BOY	Projected Tuition Payments (BOY)*	Projected Administrative Expenses Plus Cash Contributions	Projected Contract Payments (BOY)	Actuarial Value of Assets at EOY
2017	6.75%	n/a	n/a	\$ 16,760,182	\$ 368,993	\$ 18,450	\$ 2,800,206	\$ 20,301,664
2018	6.75%	6.00%	5.50%	20,301,664	486,509	24,325	2,009,143	23,158,943
2019	6.75%	6.00%	5.50%	23,158,943	548,595	27,430	1,813,649	26,043,335
2020	6.75%	6.00%	5.50%	26,043,335	668,355	33,418	1,529,488	28,684,847
2021	6.75%	6.00%	5.50%	28,684,847	693,095	34,655	1,223,006	31,149,759
2022	6.75%	6.00%	5.50%	31,149,759	566,740	28,337	1,042,999	33,730,523
2023	6.75%	6.00%	5.50%	33,730,523	634,575	31,729	990,531	36,353,447
2024	6.75%	6.00%	5.50%	36,353,447	848,509	42,425	867,809	38,782,618
2025	6.75%	6.00%	5.50%	38,782,618	912,552	45,628	754,785	41,183,321
2026	6.75%	6.00%	5.50%	41,183,321	1,208,100	60,405	612,702	43,263,126
2027	6.75%	6.00%	5.50%	43,263,126	1,465,825	73,291	511,660	45,086,577
2028	6.75%	6.00%	5.50%	45,086,577	1,780,263	89,013	320,788	46,476,910
2029	6.75%	6.00%	5.50%	46,476,910	2,057,362	102,868	214,486	47,537,020
2030	6.75%	6.00%	5.50%	47,537,020	2,643,457	132,173	195,980	47,991,993
2031	6.75%	6.00%	5.50%	47,991,993	3,232,293	161,615	157,452	47,776,536
2032	6.75%	6.00%	5.50%	47,776,536	4,428,913	221,446	112,642	46,157,439
2033	6.75%	6.00%	5.50%	46,157,439	7,272,307	363,615	39,371	41,163,747
2034	6.75%	6.00%	5.50%	41,163,747	8,381,466	419,073	3,875	34,551,861
2035	6.75%	6.00%	5.50%	34,551,861	7,916,157	395,808	-	28,011,089
2036	6.75%	6.00%	5.50%	28,011,089	7,232,409	361,620	-	21,795,211
2037	6.75%	6.00%	5.50%	21,795,211	5,271,910	263,596	-	17,357,236
2038	6.75%	6.00%	5.50%	17,357,236	1,616,883	80,844	-	16,716,525
2039	6.75%	6.00%	5.50%	16,716,525	8,976	449	-	17,834,829
2040	6.75%	6.00%	5.50%	17,834,829	-	-	-	19,038,680

* Includes estimated refund payments for contracts who are past the expected matriculation year and did not utilize credits within the past year.

Mississippi Prepaid Affordable College Tuition Program (MPACT)

Horizon Plan

Projection Based on June 30, 2016 Alternate 1

Input	
Valuation	
Assumed Rate of Investment Return	5.00%
Geometric Average of Actual Rates of Investment Returns	5.00%
Annual Cash Contribution from State or Other Outside Source	\$ -

Estimated Valuation Results	
Present Value of Future Tuition and Fees	\$ 25,441,164
Present Value of Future Contract Payments	\$ 12,748,431
June 30, 2016 Assets	\$ 16,760,182
Unfunded Liability / (Margin)	\$ (4,067,448)
Funded Status	115.99%
Year Insolvent	Never

Fiscal Year	Actual Investment Return During Year	Actual Tuition Increase for Universities	Actual Tuition Increase for Junior Colleges/CC	Actuarial Value of Assets at BOY	Projected Tuition Payments (BOY)*	Projected Administrative Expenses Plus Cash Contributions	Projected Contract Payments (BOY)	Actuarial Value of Assets at EOY
2017	5.00%	n/a	n/a	\$ 16,760,182	\$ 371,520	\$ 18,576	\$ 2,823,444	\$ 19,987,752
2018	5.00%	4.50%	4.00%	19,987,752	482,892	24,145	2,025,816	22,469,331
2019	5.00%	4.50%	4.00%	22,469,331	536,812	26,841	1,828,700	24,921,098
2020	5.00%	4.50%	4.00%	24,921,098	644,601	32,230	1,542,182	27,075,771
2021	5.00%	4.50%	4.00%	27,075,771	659,049	32,952	1,233,155	28,997,771
2022	5.00%	4.50%	4.00%	28,997,771	531,325	26,566	1,051,654	30,966,110
2023	5.00%	4.50%	4.00%	30,966,110	586,514	29,326	998,751	32,916,473
2024	5.00%	4.50%	4.00%	32,916,473	773,121	38,656	875,011	34,628,692
2025	5.00%	4.50%	4.00%	34,628,692	819,693	40,985	761,049	36,255,517
2026	5.00%	4.50%	4.00%	36,255,517	1,071,667	53,583	617,787	37,535,456
2027	5.00%	4.50%	4.00%	37,535,456	1,279,752	63,988	515,907	38,543,005
2028	5.00%	4.50%	4.00%	38,543,005	1,532,186	76,609	323,450	39,120,542
2029	5.00%	4.50%	4.00%	39,120,542	1,745,704	87,285	216,266	39,379,011
2030	5.00%	4.50%	4.00%	39,379,011	2,211,195	110,560	197,607	39,117,605
2031	5.00%	4.50%	4.00%	39,117,605	2,665,431	133,272	158,759	38,301,544
2032	5.00%	4.50%	4.00%	38,301,544	3,600,508	180,025	113,577	36,366,316
2033	5.00%	4.50%	4.00%	36,366,316	5,828,447	291,422	39,697	31,800,452
2034	5.00%	4.50%	4.00%	31,800,452	6,622,512	331,126	3,907	26,093,258
2035	5.00%	4.50%	4.00%	26,093,258	6,166,566	308,328	-	20,599,281
2036	5.00%	4.50%	4.00%	20,599,281	5,554,037	277,702	-	15,505,920
2037	5.00%	4.50%	4.00%	15,505,920	3,990,502	199,525	-	11,881,687
2038	5.00%	4.50%	4.00%	11,881,687	1,206,378	60,319	-	11,145,740
2039	5.00%	4.50%	4.00%	11,145,740	6,583	329	-	11,695,769
2040	5.00%	4.50%	4.00%	11,695,769	-	-	-	12,280,558

* Includes estimated refund payments for contracts who are past the expected matriculation year and did not utilize credits within the past year.

Mississippi Prepaid Affordable College Tuition Program (MPACT)

Horizon Plan

Projection Based on June 30, 2016 Alternate 2

Input	
Valuation	
Assumed Rate of Investment Return	5.75%
Geometric Average of Actual Rates of Investment Returns	5.75%
Annual Cash Contribution from State or Other Outside Source	\$ -

Estimated Valuation Results	
Present Value of Future Tuition and Fees	\$ 23,021,267
Present Value of Future Contract Payments	\$ 12,396,671
June 30, 2016 Assets	\$ 16,760,182
Unfunded Liability / (Margin)	\$ (6,135,585)
Funded Status	126.65%
Year Insolvent	Never

Fiscal Year	Actual Investment Return During Year	Actual Tuition Increase for Universities	Actual Tuition Increase for Junior Colleges/CC	Actuarial Value of Assets at BOY	Projected Tuition Payments (BOY)*	Projected Administrative Expenses Plus Cash Contributions	Projected Contract Payments (BOY)	Actuarial Value of Assets at EOY
2017	5.75%	n/a	n/a	\$ 16,760,182	\$ 370,430	\$ 18,521	\$ 2,813,414	\$ 20,122,308
2018	5.75%	4.50%	4.00%	20,122,308	481,481	24,074	2,018,620	22,766,879
2019	5.75%	4.50%	4.00%	22,766,879	535,242	26,762	1,822,204	25,408,635
2020	5.75%	4.50%	4.00%	25,408,635	642,777	32,139	1,536,703	27,780,972
2021	5.75%	4.50%	4.00%	27,780,972	657,162	32,858	1,228,775	29,948,110
2022	5.75%	4.50%	4.00%	29,948,110	529,779	26,489	1,047,918	32,190,047
2023	5.75%	4.50%	4.00%	32,190,047	584,804	29,240	995,203	34,444,051
2024	5.75%	4.50%	4.00%	34,444,051	770,877	38,544	871,902	36,490,658
2025	5.75%	4.50%	4.00%	36,490,658	817,312	40,866	758,345	38,483,298
2026	5.75%	4.50%	4.00%	38,483,298	1,068,587	53,429	615,593	40,160,545
2027	5.75%	4.50%	4.00%	40,160,545	1,275,996	63,800	514,074	41,596,576
2028	5.75%	4.50%	4.00%	41,596,576	1,527,729	76,386	322,301	42,632,860
2029	5.75%	4.50%	4.00%	42,632,860	1,740,591	87,030	215,498	43,379,429
2030	5.75%	4.50%	4.00%	43,379,429	2,204,752	110,238	196,905	43,633,871
2031	5.75%	4.50%	4.00%	43,633,871	2,657,686	132,884	158,195	43,359,082
2032	5.75%	4.50%	4.00%	43,359,082	3,590,010	179,501	113,173	41,985,652
2033	5.75%	4.50%	4.00%	41,985,652	5,811,414	290,571	39,556	37,988,808
2034	5.75%	4.50%	4.00%	37,988,808	6,603,092	330,155	3,893	32,845,374
2035	5.75%	4.50%	4.00%	32,845,374	6,148,466	307,423	-	27,906,880
2036	5.75%	4.50%	4.00%	27,906,880	5,537,894	276,895	-	23,362,387
2037	5.75%	4.50%	4.00%	23,362,387	3,979,232	198,962	-	20,287,284
2038	5.75%	4.50%	4.00%	20,287,284	1,203,049	60,152	-	20,117,967
2039	5.75%	4.50%	4.00%	20,117,967	6,573	329	-	21,267,452
2040	5.75%	4.50%	4.00%	21,267,452	-	-	-	22,490,331

* Includes estimated refund payments for contracts who are past the expected matriculation year and did not utilize credits within the past year.

Mississippi Prepaid Affordable College Tuition Program (MPACT)

Horizon Plan

Projection Based on June 30, 2016 Alternate 3

Input	
Valuation	
Assumed Rate of Investment Return	***
Geometric Average of Actual Rates of Investment Returns	4.62%
Annual Cash Contribution from State or Other Outside Source	\$ -

Estimated Valuation Results	
Present Value of Future Tuition and Fees	\$ 26,936,492
Present Value of Future Contract Payments	\$ 13,378,302
June 30, 2016 Assets	\$ 16,760,182
Unfunded Liability / (Margin)	\$ (3,201,991)
Funded Status	111.89%
Year Insolvent	Never

Fiscal Year	Actual Investment Return During Year	Actual Tuition Increase for Universities	Actual Tuition Increase for Junior Colleges/CC	Actuarial Value of Assets at BOY	Projected Tuition Payments (BOY)*	Projected Administrative Expenses Plus Cash Contributions	Projected Contract Payments (BOY)	Actuarial Value of Assets at EOY
2017	2.00%	n/a	n/a	\$ 16,760,182	\$ 376,005	\$ 18,800	\$ 2,864,664	\$ 19,449,187
2018	2.00%	4.50%	4.00%	19,449,187	488,690	24,435	2,055,392	21,298,756
2019	2.00%	4.50%	4.00%	21,298,756	543,263	27,163	1,855,398	23,035,402
2020	5.00%	4.50%	4.00%	23,035,402	644,601	32,230	1,542,182	25,095,790
2021	5.00%	4.50%	4.00%	25,095,790	659,049	32,952	1,233,155	26,918,791
2022	5.00%	4.50%	4.00%	26,918,791	531,325	26,566	1,051,654	28,783,181
2023	5.00%	4.50%	4.00%	28,783,181	586,514	29,326	998,751	30,624,398
2024	5.00%	4.50%	4.00%	30,624,398	773,121	38,656	875,011	32,222,013
2025	5.00%	4.50%	4.00%	32,222,013	819,693	40,985	761,049	33,728,504
2026	5.00%	4.50%	4.00%	33,728,504	1,071,667	53,583	617,787	34,882,093
2027	5.00%	4.50%	4.00%	34,882,093	1,279,752	63,988	515,907	35,756,973
2028	5.00%	4.50%	4.00%	35,756,973	1,532,186	76,609	323,450	36,195,209
2029	5.00%	4.50%	4.00%	36,195,209	1,745,704	87,285	216,266	36,307,411
2030	5.00%	4.50%	4.00%	36,307,411	2,211,195	110,560	197,607	35,892,425
2031	5.00%	4.50%	4.00%	35,892,425	2,665,431	133,272	158,759	34,915,106
2032	5.00%	4.50%	4.00%	34,915,106	3,600,508	180,025	113,577	32,810,556
2033	5.00%	4.50%	4.00%	32,810,556	5,828,447	291,422	39,697	28,066,903
2034	5.00%	4.50%	4.00%	28,066,903	6,622,512	331,126	3,907	22,173,031
2035	5.00%	4.50%	4.00%	22,173,031	6,166,566	308,328	-	16,483,044
2036	5.00%	4.50%	4.00%	16,483,044	5,554,037	277,702	-	11,183,870
2037	5.00%	4.50%	4.00%	11,183,870	3,990,502	199,525	-	7,343,536
2038	5.00%	4.50%	4.00%	7,343,536	1,206,378	60,319	-	6,380,680
2039	5.00%	4.50%	4.00%	6,380,680	6,583	329	-	6,692,457
2040	5.00%	4.50%	4.00%	6,692,457	-	-	-	7,027,079

* Includes estimated refund payments for contracts who are past the expected matriculation year and did not utilize credits within the past year.

*** The Assumed rate of return is 2.0% for 3 years and 5% thereafter.

Mississippi Prepaid Affordable College Tuition Program (MPACT)

Horizon Plan

Projection Based on June 30, 2016 Alternate 4

Input	
Valuation	
Assumed Rate of Investment Return	4.20%
Geometric Average of Actual Rates of Investment Returns	4.20%
Annual Cash Contribution from State or Other Outside Source	\$ -

Estimated Valuation Results	
Present Value of Future Tuition and Fees	\$ 28,372,170
Present Value of Future Contract Payments	\$ 13,146,232
June 30, 2016 Assets	\$ 16,760,182
Unfunded Liability / (Margin)	\$ (1,534,244)
Funded Status	105.41%
Year Insolvent	Never

Fiscal Year	Actual Investment Return During Year	Actual Tuition Increase for Universities	Actual Tuition Increase for Junior Colleges/CC	Actuarial Value of Assets at BOY	Projected Tuition Payments (BOY)*	Projected Administrative Expenses Plus Cash Contributions	Projected Contract Payments (BOY)	Actuarial Value of Assets at EOY
2017	4.20%	n/a	n/a	\$ 16,760,182	\$ 372,697	\$ 18,635	\$ 2,834,262	\$ 19,844,188
2018	4.20%	4.50%	4.00%	19,844,188	484,413	24,221	2,033,578	22,154,109
2019	4.20%	4.50%	4.00%	22,154,109	538,504	26,925	1,835,707	24,408,210
2020	4.20%	4.50%	4.00%	24,408,210	646,568	32,328	1,548,090	26,339,055
2021	4.20%	4.50%	4.00%	26,339,055	661,085	33,054	1,237,880	28,011,873
2022	4.20%	4.50%	4.00%	28,011,873	532,993	26,650	1,055,684	29,705,246
2023	4.20%	4.50%	4.00%	29,705,246	588,358	29,418	1,002,578	31,353,830
2024	4.20%	4.50%	4.00%	31,353,830	775,542	38,777	878,363	32,737,425
2025	4.20%	4.50%	4.00%	32,737,425	822,261	41,113	763,965	34,008,812
2026	4.20%	4.50%	4.00%	34,008,812	1,074,989	53,749	620,154	34,907,238
2027	4.20%	4.50%	4.00%	34,907,238	1,283,804	64,190	517,883	35,508,367
2028	4.20%	4.50%	4.00%	35,508,367	1,536,994	76,850	324,689	35,656,420
2029	4.20%	4.50%	4.00%	35,656,420	1,751,218	87,561	217,095	35,464,194
2030	4.20%	4.50%	4.00%	35,464,194	2,218,146	110,907	198,364	34,733,513
2031	4.20%	4.50%	4.00%	34,733,513	2,673,786	133,689	159,367	33,432,992
2032	4.20%	4.50%	4.00%	33,432,992	3,611,833	180,592	114,012	31,004,271
2033	4.20%	4.50%	4.00%	31,004,271	5,846,819	292,341	39,849	25,950,969
2034	4.20%	4.50%	4.00%	25,950,969	6,643,460	332,173	3,922	19,776,387
2035	4.20%	4.50%	4.00%	19,776,387	6,186,090	309,305	-	13,838,794
2036	4.20%	4.50%	4.00%	13,838,794	5,571,449	278,572	-	8,324,300
2037	4.20%	4.50%	4.00%	8,324,300	4,002,658	200,133	-	4,294,613
2038	4.20%	4.50%	4.00%	4,294,613	1,209,969	60,498	-	3,151,160
2039	4.20%	4.50%	4.00%	3,151,160	6,593	330	-	3,276,295
2040	4.20%	4.50%	4.00%	3,276,295	-	-	-	3,413,899

* Includes estimated refund payments for contracts who are past the expected matriculation year and did not utilize credits within the past year.